

**Bureau of Mining Regulation and Reclamation**  
**GUIDANCE DOCUMENT FOR PREPARATION OF**  
**OPERATING PLANS**  
**FOR MINING FACILITIES**

February 2, 1994

Operating plans, as required by NAC 445A.398, describe how a specific facility should be operated under various conditions. The plans should serve as a practical guide to the facility operator, and provide handy and useful information for both routine and unusual circumstances. Well-planned operation of a facility will optimize process efficiency and minimize the potential for degradation of waters of the state.

1. **INTRODUCTION:** An overall description of the mineral processing circuit, including a flow chart of the facility.
2. **FLUID MANAGEMENT PLAN:** This plan should include a drawing showing the layout and interconnection of all components of the fluid management system. A flow chart and water balance should be provided to show normal and maximum operating flows. The plan should include basic operational parameters such as:
  - A. LEACH PADS
    - lift height
    - lift set back
    - maximum heap height
    - average area of solution application
    - leak detection sump locations and capacities

B. PROCESS SOLUTION PONDS

- normal operating capacity of each pond
- total capacity of each pond
- pond interconnections/overflows
- leak detection sump locations and capacities

C. TAILINGS IMPOUNDMENTS

- normal size and depth of supernatant pond
- anticipated dimensions of pond after design storm event
- leak detection or vadose monitoring well locations

The plan should also include procedures for:

- routinely documenting how much fluid is in the system
- managing solutions when a process component must be shut down temporarily
- tailings discharge rotation
- managing solutions during storm events
- reducing the quantity of fluid in the system during upset conditions
- handling seasonal fluctuations
- timely removal of solution from single-lined ponds

3. **MONITORING PLAN:** This plan should clearly identify all proposed site monitoring locations and leak detection monitoring points on a site map. Each location should have a unique identification label. The monitoring plan should address the proposed monitoring protocols for each point and indicate how the sampling will document the continued integrity of the process components. Procedures for reporting monitoring results, removal and handling of fluids from leak detection sumps, and identifying, quantifying and correcting leaks in liner systems should be clearly defined.
4. **EMERGENCY RESPONSE PLAN:** This plan should identify those persons or positions responsible for taking action to respond to spills or releases of regulated materials at the facility. Names, phone numbers, chain of authority and responsibilities should be clearly identified.

The plan should identify the types, quantities and locations of all regulated materials on the site, locations of safety equipment and neutralizing chemicals, and the specific actions to be taken for different types, sizes and locations of spills and releases.

The plan should describe spill/release reporting procedures in accordance with all applicable regulations, including the Notification of Release regulations, NAC445A.345 through 445A.350 and all permit conditions.

5. **TEMPORARY CLOSURE PLAN:** The purpose of this plan is to ensure the integrity of the fluid management system during temporary closures. The plan defines those certain events which will result in planned suspension of active operations, such as seasonal conditions, planned maintenance outages or unfavorable economic conditions. It details the actions to be taken to maintain the stability of the process components until operations resume. Unplanned temporary closures are not covered under this plan, and must be handled in accordance with NAC 445A.445. If the permittee proposes to reduce the level of monitoring during temporary closure, this must be clearly described in the plan.

The Temporary Closure Plan should include:

- List of events which will cause temporary closure
- Actions to be taken for each event
- Site inspection plan for evaluation of system integrity
- Facility manning levels and duties
- Process fluid quantities and pond levels during temporary closure
- Proposed temporary changes to monitoring plan
- Estimated duration of temporary closure

6. **TENTATIVE PERMANENT CLOSURE PLAN:** This plan assists the operator in preparation for eventual permanent closure (chemical stabilization) of the site. It should identify all process components, and describe the procedures, methods and schedules for detoxification and stabilization of all known and potential contaminants from the processing of ore at the site. It should include proposed plans for gathering data for the characterization of materials of concern on an ongoing basis throughout the life of the project and upon closure. Several guidance documents covering closure plans are available from NDEP. A Final Closure Plan must be submitted two years prior to closure of the site.